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Linking Information Technology and Dynamic Capabilities: The Elusive Dancing Partners?

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LINKING INFORMATION TECHNOLOGY AND DYNAMIC CAPABILITIES: THE ELUSIVE DANCING PARTNERS?

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Overview

A key question for information systems researchers and practitioners is how IT can build a competitive advantage in turbulent environments (Sambamurthy et al. 2003). The increase in environmental turbulence has made “dynamic IS strategy” all the more challenging; however, this critical topic still remains relatively under-researched (Wade and Hulland 2004). Most important, even if the link between IT and competitive advantage has been extensively examined, there is still a debate about the strategic role of IT (Carr 2003), which may intensify in turbulent environments.

The dynamic capabilities view (Eisenhardt and Martin 2000; Teece et al. 1997), which has recently attracted the interest of the IS community has been proposed as a viable theoretical perspective to guide research on dynamic IS strategy. Dynamic capabilities are defined as the ability to integrate, build, and reconfigure existing resources to renew functional competencies that adapt to turbulent environments (Eisenhardt and Martin 2000; Teece et al. 1997). This view has been recognized in practice (Boynton 1993; Hagel and Brown 2001; Weill et al. 2002), and it has also attracted theoretical attention (Jarvenpaa and Leidner 1998; Sambamurthy et al. 2003). Even so, there are still misunderstandings about the nature and role of dynamic capabilities, and whether these capabilities “are born, not made” (Winter 2003). Most important, we still know little about whether, how, and why IT links to dynamic capabilities and competitive advantage in turbulent environments. Even if IT and dynamic capabilities have an intuitive relationship, they are still *elusive dancing partners*.

Panel Format

This panel aims to bring together IS and strategy researchers to (1) discuss opposing views and misunderstandings about dynamic capabilities, (2) suggest unexplored links between IT and dynamic capabilities, and (3) propose research avenues to enable the study of dynamic IS strategy. The panelists will have dual debates on certain topics for 10 to 15 minutes (5 minutes for each panelist), followed by a 5 to 10 minute discussion and question and answer session with the audience, as outlined below.

Debate 1: Speed of the Dance

Omar El Sawy will argue that the reason that IT and dynamic capabilities are still elusive dancing partners is that theory has not adequately addressed the management of real-time enterprises, which can help us identify new drivers in an extreme IT-enabled sense-and-respond world. While the link between IT and dynamic capabilities and understanding flexibility issues around plug-and-play supply chains are strategic issues for the real-time enterprise, there are also many operational issues in real-time management that require theoretical development. Both strategic and operational issues will aid our understanding of the dance. These include design theories for vigilant information systems that help alert to impending changes, the requirements of real-time knowledge management, and the management of process exceptions under time pressure.

In contrast, **Anandhi Bharadwaj** will argue that synchronization requires a punctuated equilibrium model: sometimes, IT and business strategy must dance to the same steps and, at other times, IT managers must step out ahead of their organization to

proactively nurture IT and business capabilities for the future. Samba will propose that alignment is an important dynamic capability whose nature and influence has been misunderstood. Contrary to the traditional view of alignment as ensuring that IT investments and capabilities support business strategy, he will argue that alignment be viewed as dynamic synchronization between IT and business capabilities.

Debate 2: Direction of Impacts—IT and Business

Paul Pavlou will argue that dynamic capabilities may be a missing link in the IT-competitive advantage relationship in turbulent environments. Paul will argue that IT should have an enabling role on dynamic capabilities, and an indirect role on functional competencies and competitive advantage. Extending work that questioned a direct effect of IT on performance (Devaraj and Kohli 2003, Tippins and Sohi 2003) by taking advantage of recent work in dynamic capabilities (Winter 2003) and IS strategy (Sambamurthy et al. 2003), he will propose a model by which firms can leverage IT to build a competitive advantage in turbulent environments through dynamic capabilities (Figure 1).

In contrast, **Paul Tallon** will argue about the opposite directions, proposing that we need to add feedback loops from strategy-environment alignment to dynamic capabilities, and from dynamic capabilities to IT competences. Over time, these capabilities become embedded in firm structures and routines. As a result, a sudden shift in the environment can prove troubling for firms that are forced to redefine their portfolio of dynamic capabilities and IT competences in order to achieve strategic realignment. Drawing from case studies in the electronics, financial services, and telecoms sectors, Paul will show how firms can better meet the demands of a changing environment by building flexible IT systems that support a redefinition of dynamic capabilities.

Discussion: Strategy Views and Research Directions

Anil Gupta will lead this discussion by framing the research directions from a strategy perspective, proposing potential research avenues that IS researchers could pursue. Following corresponding research directions by the IS panelists, audience participation will be encouraged for an interactive discussion on framing the links between IT and dynamic capabilities.

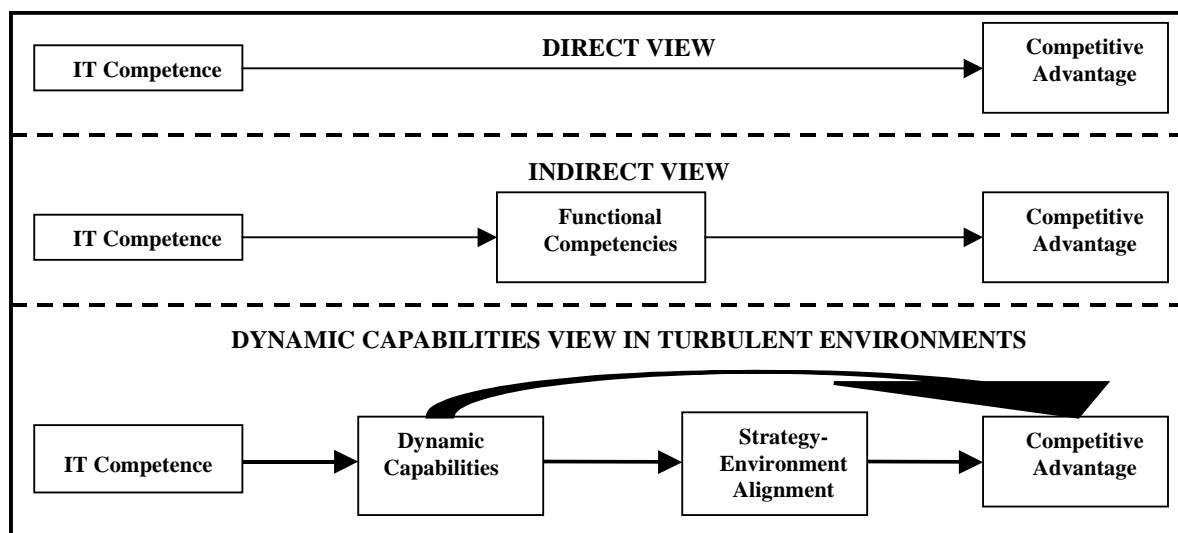


Figure 1. Dominant Theoretical Views of IT: Competitive Advantage Relationship

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